UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,943	10/02/2003	Doron Shaked	100203850-1	5895

22879	7590	09/28/2007

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EXAMINER
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ART UNIT	PAPER NUMBER
2624	

MAIL DATE	DELIVERY MODE
09/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 October 2003*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-24* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *02 October 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date *8/05, 2/04*.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

DETAILED ACTION

Requirement for Information

Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.

In response to this requirement, please provide answers to each of the following interrogatories eliciting factual information that is known by the applicant and the assignee of this application:

1. Please state the application number of every application that claims the benefit of or priority to U.S. Application Number 10/675,943. For example, if any patent application filed in Europe claims the benefit of or priority to U.S. Application Number 10/675,943, please identify the application number of each such application filed in Europe. Also, if any applications have been filed in any other countries that claim the benefit of or priority to U.S. Application Number 10/675,944 then state the application number of each such application.

2. Has any application that claims the benefit of or priority to U.S. Application Number 10/675,943 ever received a search report, an Office action or an examination report from a Patent Office? Please respond by answering "yes" if any such application has received a search report, an Office action or an examination report from a Patent Office or by answering "no" if no such application has received a search report, an Office action or an examination report from a Patent Office.

3. If the answer to 2 is "yes" then submit a copy of each search report, Office action and examination report.

4. Has any claim from any application that claims the benefit of or priority to U.S. Application Number 10/675,943 ever been rejected by a Patent Office? Please respond by answering "yes" if any claim from any such application has been rejected by a Patent Office or by answering "no" if none of the claims from any such application have been rejected by a Patent Office.

5. If the answer to 4 is "yes" then submit a copy of each rejection and identify each rejected claim.

6. Have any claims from any application that claims the benefit of or priority to U.S. Application Number 10/675,943 been allowed by a Patent Office? Please respond by answering "yes" if any claims from any such application have been allowed by a Patent Office or by answering "no" if no claims from any such application have been allowed by a Patent Office. If the answer to this question is "yes," please identify the allowed claims.

This information is relevant to patentability. Applicant is reminded that failure to fully reply to this requirement for information will result in a holding of abandonment. This requirement is an attachment of the enclosed Office action. A complete reply to the enclosed Office action must include a complete reply to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action.

Drawings

New corrected drawings in compliance with 37 CFR 1.121(d) are required

in this application because many of the drawings have details that are hardly

visible. For example, the details of figures 7a-7c, 8a-8b, 13a-13c, 14a-14d, 15,

16a-16d and 17a-17d are impossible to view. These figures are barely more

than black marks on a white background. In other words, the differences

between figures 17a, 17b, 17c and 17d are impossible to see. This is one

example, all of the figures mentioned have this problem.

Also, in figure 1a, the handwritten marks are illegible.

Applicant is advised to employ the services of a competent patent

draftsperson outside the Office, as the U.S. Patent and Trademark Office no

longer prepares new drawings. The corrected drawings are required in reply to

the Office action to avoid abandonment of the application. The requirement for

corrected drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities. In

paragraph 33, "FIG. 12" should be "FIGS. 12a and 12b."

In paragraph 50, the discussion of figure 1a mentions "s," where is "s" in

figure 1a?

Throughout the application the word "casual" should be replaced with

"causal." See for example paragraph 54.

In paragraph 64, "0110" should be "110."

In paragraph 65, the first equation should be L_{i-1} instead of L_i (other instances of this equation have this problem also and need to be corrected).

In paragraph 67, the phrase "FIG. 3 presents the signal S 100, and" should be "FIG. 3 presents the signal S 100', and" to be consistent with what is shown in figure 3. Also, the phrase "a cascaded causal envelope L 130 (from (9)), which is much more like an envelope" makes no sense.

In paragraph 73 "a constant a everywhere" should be "a constant alpha everywhere."

In paragraph 78, 0170 should be 170.

Also in this paragraph "-1/T(10)" should be "-1/T (10)."

In paragraph 79, "the robust envelope 170 (see FIG. 5)" is not shown in figure 5. A reference number 170 should be added to figure 5 if this figure is showing the robust envelope 170.

In paragraph 80 "As can bee seen in FIG. 8b" is incorrect because not much can be seen in figure 8b. Also, "bee" should be "be."

Paragraph 82 is missing a paren.

In paragraphs 126-128, "FIG. 17" should be more specific, because the application does not contain figure 17.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In claim 1, this claim recites a mathematical algorithm without limitation to a practical application. The claimed "processors" are defined only by mathematical terms. For example, the Retinex-type processor is a statistics "processor" or algorithm and a point operation "processor" or algorithm. In other words, anything that performs the statistics and the point operation is a "processor" as defined by the claim therefore this claim is non-statutory.

Claim 10 defines a cascaded recursive filter in terms of a mathematical equation and is therefore non-statutory.

Claim 15 recites filters that are defined in the specification and subsequent claims as mathematical algorithms and is therefore non-statutory.

Claim Rejections - 35 USC § 112

Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claim 1, the input processor receives "an image" which conflicts with the antecedent "color images" in the preamble. The term "an image" should read "one of the color images" to be consistent with the claim as a whole. Similarly,

"the input image" should be "the input color image." Also, the output processor is unrelated to the rest of the elements and performs no discernable function.

For claim 2, the variables such as L, alpha, S, and ∇ need to be defined. Also, the apostrophe at the end of the equation needs to be defined or removed from the claim.

For claim 6, the meaning of the term $\nabla_N S \langle$-T should be defined or rewritten, because in the published version of this claim this term appears as $\nabla_N S < -T$, which is inconsistent with the specification and the claim as originally filed. Other claims that have this term have the same problem.

For claim 8, the open/close prefilter is unrelated to the rest of the elements and performs no discernable function. The term "open/close prefilter" makes no sense. Also, "a maximum with the input image as a post processor" makes no sense.

For claim 9, the scaled gradient is unrelated to the rest of the claim. The scaled gradient is not used to do anything. This claim would make sense if it or its parent claim 8 depended from claim 6.

For claim 10, the variables need to be defined and the apostrophe should be removed or defined.

For claim 15, the function performed by the "open/close prefilter" is not discernable from the claim and makes no sense. Also, "applying a post filter maximum output" makes no sense.

For claim 16 the variables need to be defined and the apostrophe needs to be removed or defined.

For claim 22, "sequentially applying the cascaded filter following a compass notation" is unclear. The only compass notation mentioned is SE in claim 16.

For claims 23 and 24, the application of the compass notations is unclear. Also, in claim 24, "comprises four filters in the cascade, including SE, NW, SW, NE, SE, NW" is unclear because this includes a minimum of six compass notations. How many filters are used in each compass notation? This claim should reflect the number of filters used in applying the six compass notations.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 8 and 15 are rejected under 35 U.S.C. 102(a) as being anticipated by International Publication Number WO 02/089062 by Kimmel et al. ("Kimmel").

For claim 1, Kimmel discloses an apparatus for processing color images, comprising: an input processor, wherein an image is received (figure 2 input image S); a Retinex-type processor, comprising: a local statistics processor, comprising a cascaded recursive filter (iterative estimator 104), and a point operation processor correcting pixels of the input image according to

corresponding pixel values in the local statistics processor (108); and an output

processor (111).

For claim 8, Kimmel discloses an open/close prefilter (102) and a

maximum with the input image as a post processor (110).

For claim 15, Kimmel discloses a method for processing an input image S,

comprising: applying an open/close prefilter to the image S (102); applying a

cascaded recursive filter to the image S (104); and applying a post filter

maximum output to the image S (110).

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

"Lightness Determination at Curved Surfaces with Applications to

Dynamic Range Compression and Model-Based Coding of Facial Images" by

Werner Blohm discloses a Retinex-type processor that has a cascaded recursive

filter and a point operations processor as discussed on page 1138.

"Post-filtering for Color Appearance in Synthetic Images Tone

Reproduction" by Daniele Marini et al. discloses a Retinex-type processor that

has a cascaded recursive filter and a point operations processor as discussed on

page 378.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey S. Smith whose telephone number is 571 270-1235. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSS
September 21, 2007

SAMIR AHMED
PRIMARY EXAMINER